COMPLETE IF KNOWN HINFORMATION DISCLOSURE STATEMENT BY APPLICANT 10/681,553 **Application Number** 7774 Confirmation Number Filing Date October 7, 2003 Form PTO-1449 (Modified) First Named Inventor Eric J. BERGMAN (Use several sheets if necessary) Group Art Unit 1746 **Examiner Name** Sheet of Attomey Docket No. 54008.8012.US04 (P96-0015US5)

					U.S. PATENT DOCUMENTS			
Examiner Initials*	Cite No.	U.S. Patent or Application Kind Code NUMBER (if known)		Code	Name of Patentee or Inventor of Cited Document	Date of Publication or Filing Date of Cited Document	Pages, Columns, Lines Where Relevant Passage Relevant Figures Appe	s or
MK	EZ	6,551,409)	1	DeGendt	04/22/03		
MK	FA	2002/001	1257	. 1	DeGendt	01/31/02		
				FO	REIGN PATENT DOCUMENTS			
Examiner Initials*	Cite No.	Foreign Patent or Application Kind Cod Office NUMBER (if known				Date of Publication or Filing Date of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	Т
		-						
•		C	THER PR	IOR AF	RT-NON PATENT LITERATURE	OCUMENTS		
Examiner Initials*	Cite No.		Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume issue number(s), publisher, city and/or country where published.					
MC	FB		Golland, D.E., et al., "The Clean Module: Advanced Technology for Processing Silicon Wafers." Semiconductor Int'l., pp. 154-157 (Sep. 1987).					

EXAMINER 6	DATE CONSIDERED
No service of the ser	08/18/04
	/ / ·
*FYAMINER: Initial if reference considered whether as not existing in	in an forman with MDED 600. Down line through sitation if sating a forman and

*EXAMINER: Initial if reference considered, whether or not criteria is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to application(s).

10/07/2003

EM No. EV 2	54990096US			COMPLETE IF KNOWN		
	*************			Application Number	Not yet assigned	
		DISCLOSURE		Confirmation Number		
	-	BY APPLICANT		Filing Date	October 7, 2003	
		149 (Modified)		First Named Inventor	Eric J. BERGMAN	
	(Use several she	eets if necessary)	Group Art Unit		
				Examiner Name		
Sheet	1	of	5	Attorney Docket No.	54008.8012.US04	

U.S. PATENT DOCUMENTS						
		U.S. Patent or Applica	ition		Date of Publication or Filing Date	Pages, Columns, Lines,
Examiner Initials*	Cite No.		Code nown)	Name of Patentee or Inventor of Cited Document	of Cited Document	Where Relevant Passages or Relevant Figures Appear
MK	AA	5,055,138	1	Slinn	10/08/91	Relevant Figures Appear
1	AB	5,120,370	1-	Mori et al.	06/09/92	
	AC	5,647,386		Kaiser	07/15/97	
	AD	5,503,708		Koizumi et al.	04/02/96	
	AE	5,308,745		Schwartzkopf	05/03/94	
	AF	4,695,327		Grebinski	09/22/87	
	AG	5,632,847		Ohno et al.	05/27/97	
	AH	5,911,837		Matthews	06/15/99	
	AI	5,705,089		Sugihara et al.	01/06/98	
	AJ	5,244,000		Stanford et al.	09/14/93	
	AK	5,896,875		Yoneda	04/27/99	
	AL	4,974,530		Lyon	12/04/90	
	AM	5,120,370		Mori et al.	06/09/92	
	AN	5,647,386		Kaiser	07/15/97	
	AO	5,248,380		Tanaka -	09/28/93	
	AP	5,520,744		Fujikawa et al.	05/28/96	
	AQ	5,415,191		Mashimo et al.	05/16/95	
	AR	5,658,615		Hasebe et al.	08/19/97	
	AS	5,858,107		Chao et al.	01/12/99	
	ΑT	5,971,368		Nelson et al.	10/26/99	
	AU	5,234,540		Grant et al.	08/10/93	
	ΑV	5,803,982		Kosofsky et al.	09/08/98	
	AW	5,944,907		Ohmi	08/31/99	
	ΑX	5,232,511		Bergman	08/03/93	
,	AY	5,776,296		Matthews	07/07/98	
	AZ	6,249,933		Berfield	06/26/01	
	BA	6,267,125		Bergman et al.	07/31/01	
	BB	6,273,108		Bergman et al.	08/14/01	
	BC	6,146,469		Toshima	11/14/00	
	BD	4,917,123		McConnell et al.	04/17/90	<u> </u>
	BE	4,749,440		Blackwood et al.	06/07/88	
	BF	4,817,652		Liu_	04/04/89	· · · · · · · · · · · · · · · · · · ·
	BG	5,571,367		Nakajima et al.	11/05/96	•
	ВН	5,063,609		Lorimer	11/05/91	
	BI	5,246,526		Yamaguchi et al.	09/21/93	
	BJ	5,372,651		Kodama	12/13/94	
	BK	3,898,141		Ermanis et al.	08/05/75	
MK	BL	4,050,954	I	Basi	09/27/77	

EXAMINER	refor	DATE CONSIDERED O8/18/04
*EXAMINER:	Initial if reference considered, whether or not criteria is in confor considered. Include copy of this form with next communication	mance with MPEP 609. Draw line through citation if not in conformance and not to application(s).

• •

INFORMATION DISCLOSURE STATEMENT BY APPLICANT Form PTO-1449 (Modified) (Use several sheets if necessary) COMPLETE IF KNOWN Application Number Confirmation Number Filing Date Confirmation Number Filing Date First Named Inventor Group Art Unit Examiner Name

Attorney Docket No.

54008.8012.US04

5

				U.S. PATENT DOCUMENTS		,
Examiner Initials*	Cite No.	U.S. Patent o	Kind Code	Name of Patentee or Inventor of Cited Document	Date of Publication or Filing Date of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
MC	BM	4,261,791		Shwartzman	04/14/81	Too tant igardo / ppeur
	BN	4,264,374		Beyer et al.	04/28/81	
	ВО	4,615,762		Jastrzebski	10/07/86	
	BP	4,899,767		McConnell	02/13/90	
	BQ	4,943,540		Ren et al.	07/24/90	
	BR	4,971,654		Schnegg et al.	11/20/90	
	BS	5,181,985		Lampert et al.	01/26/93	
	BT	5,221,423		Sugino et al.	06/22/93	
	BU	5,294,570		Fleming Jr. et al.	03/15/94	
	BV	5,464,480		Matthews	11/07/95	
	BW	5,489,557		Jolley	02/06/96	
	BX	5,158,100		Tanaka et al.	10/27/92	
	BY	5,235,995		Bergman et al.	08/17/93	
	BZ	5,238,500		Bergman	08/24/93	
	CA	5,129,955		Tanaka	07/14/92	
	CB	5,950,643		Miyazaki et al.	09/14/99	
	CC	5,105,556		Kurokawa et al.	04/21/92	
	CD	5,326,406		Kaneko et al.	07/05/94	
	CE	4,186,032		Ham	01/29/80	
	CF	5,832,177		Shinagawa et al.	11/03/98	
	CG	5,964,952		Kunze-Concewitz	10/12/99	
MIC	CH	5,378,317		Kashiwase et al.	01/03/95	•

FOREIGN PATENT DOCUMENTS								
Examiner Initials*	Cite No.	For Offic	reign Patent or Ap	Kind Code (if known)	Name of Patentee or Applicant of Cited Document	Date of Publication or Filing Date of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T
MC	CI	JР	4-302,144		Hitachi, Ltd.	10/26/1992		
1_	CJ	EP	0 782 177 A2		Texas Instruments Incorporated	07/02/1997		
	CK	JP	H03-208900		Susumu Otsuka et al.	09/12/1991		_
	CL	Љ	H04-298038		Hitachi Cable, Ltd.	10/21/1992	· · · · · · · · · · · · · · · · · · ·	\vdash
	CM	JP	S61-004232		Yukinobu Tanno et al.	01/10/1986		
	CN	ЛР	62-117330		Toshio Wada et al.	05/28/1987		
	CO	JР	8-8222		Sony Corporation	01/12/1996		
	CP	ЛР	52-12063		Hiroshi Ikeda	04/04/1977		_
MR	CQ	ЛР	H04-125927		Yutaka Watarai et al.	04/27/1992		

1910 0	CQ JP H04-125927	Yutaka Watarai et al.	04/27/1992				
EXAMINER	ufo	DATE CONSIDE	08/18/04				
*EXAMINER:	Initial if reference considered, whether or not criteria is in conformance with MPEP 609. Draw line through citation if not in conformance and reconsidered. Include copy of this form with next communication to application(s).						

Sheet

2

of

EM No. EV 254990096US INFORMATION DISCLOSURE STATEMENT BY APPLICANT Form PTO-1449 (Modified) (Use several sheets if necessary) COMPLETE IF KNOWN Application Number Confirmation Number Filing Date October 7, 2003 First Named Inventor Group Art Unit Examiner Name

Attorney Docket No.

54008.8012.US04

5

				FOF	REIGN PATENT DOCUMENTS			
Examiner	Cite No.	Offic e	reign Patent or Applicatio Kind C NUMBER (if kno	n Code	Name of Patentee or Applicant of Cited Document	Date of Publication or Filing Date of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	_
MK.	CR	JР	05-013398		Hitachi Zosen Corp.	01/22/1993	rigules Appeal	T
1	CS	JP•	H01-262627		Mikio Tsuji	10/19/1989		\vdash
	CT	JP	04-370931		Hitachi Zosen Corp.	12/24/1992		\vdash
	CU	JP	05-283389		NEC Corp.	10/29/1993		
	CV	JP	03-072626		Dainippon Screen Mfg. Co., Ltd.	03/27/1991		†
	CW	JР	06-204130		Mitsubishi Electric Corp.	07/22/1994		
	CX.	ЛР	04-302145		Hitachi Ltd.	10/26/1992		
	CY	ЛР	07-159980		Nikon Corp.	06/23/1995	=	
	CZ	JР	05-259139		Hitachi Ltd.	10/08/1993		
	DA	JР	05-109686		Nippon Steel Corp.	04/30/1993	WEA	\Box
	DB	JP	63-110732		NEC Corp.	05/16/1988		\vdash
	DC	JP	05-902329			04/09/1993		\vdash
	DD	JР	02-164035		NEC Corp.	06/25/1990		┼┤
	DE	JР	08-160032	-	Toshiba Corp.	06/21/1996		┼─┤
	DF	JР	08-08222		Sony Corp.	01/12/1996		\vdash
	DG	JР	05-047741		Dainippon Screen Mfg. Co.	02/26/1993		\vdash
	DH	JP	04-326516		NEC Corp.	11/16/1992		\vdash
	DI	JP	62 118528		Matsushita Electronics Corp.	05/29/1987		$\vdash\vdash$
	DJ	JP	05-183151		Matsushita Elec. Ind. Co. Ltd.	07/23/1993		$\vdash\vdash$
	DK	EU	0 472 441		Seiko Epson Corp.	08/1991		Н
	DL	EU	0 548 596 .		Matsuoka Terumi	11/30/1992		\vdash
	DM	EU	0 587 889		Ohmi Tadahiro	05/13/1992		\vdash
MK	DN	JР	04 301245		Canon Inc.	10/23/1992		
1110								
		г			-NON PATENT LITERATURE D			
Examiner Initials*	Cite No.	(b	nclude name of the au pook, magazine, journal, s	erial,	in CAPITAL LETTERS), title of the article symposium, catalog, etc.), date, page(s), and/or country where published.	(when appropriate), volume issue number	title of the item er(s), publisher, city	_
MK	DO	Abstract of JP 3041729 published 2/22/91.						
Ĵ	DP	Sympo	Heyns, M.M., et al. "New Wet Cleaning Strategies for Obtaining Highly Reliable Thin Oxides," MRP Symposium Proceedings on Materials Research Society, Spring Meeting, San Francisco, CA April 12-13, 1993, p. 35 (1993)					
	DQ	Adler, Ozone	Marilyn Grace and Ha Decomposition in Aqu	ill, G ueous	eorge Richard, "The Kinetics and Moss Solution" J.Am.Chem.Soc., Volume	echanism of Hydro 72, pp. 1884-86,	oxide Ion Catalyzed 1950.	
MR	DR				or photoresist removal" Solid State T			

EXAMINER	ufg	DATE CONSIDERED 08/18/04
*EXAMINER:	Initial if reference considered, whether or not criteria is in confor considered. Include copy of this form with next communication	mance with MPEP 609. Draw line through citation if not in conformance and not to application(s)

Sheet

3

of

EM No. EV 254990096US INFORMATION DISCLOSURE STATEMENT BY APPLICANT Form PTO-1449 (Modified) (Use several sheets if necessary) COMPLETE IF KNOWN Application Number Not yet assigned Confirmation Number Filting Date First Named Inventor First Named Inventor Group Art Unit Examiner Name

Attorney Docket No.

54008.8012.US04

5

of

	,	OTHER PRIOR ART-NON PATENT LITERATURE DOCUMENTS	_ ¯						
Examiner Initials*	Cite No.	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume issue number(s), publisher, city and/or country where published.	Т						
MK	DS	Christenson, Kurt K., et al. "Deionized Water Helps Remove Wafer Stripping 'Resist'-ance," www.precisioncleaningweb.com - Precision Cleaning Web - Archives, pp. 10-20 (April 1998)							
MC	DT	chested, K., et al., "Decomposition of Ozone in Aqueous Acid Solutions (pH 0-4)," J. Phys. Chem., pp. 005-1009 (1992)							
MK	DU	Krusell, W.C. et al., "Cleaning Technology for High Volume Production of Silicon Wafers," ECS Proc. of the First Int'l. Symposium on Cleaning Technology I Semiconductor Device Mfg.," pp. 23-32 (October 1989)							
	DV	Vig. John R., "UV/Ozone Cleaning of Surfaces," U.S. Army Elec. Tech. und Devices Lab., pp. 1-26							
MR	DW	Vig, John R., "UV/Ozone Cleaning of Surfaces: A Review," Surface Contamination: Genesis, Detection, and Control, pp. 235-253(1979)							
	DX	Tong, Jeremy, et al., "Aqueous Ozone Cleaning of Silicon Wafers," ECS Extended Abstracts, Phoenix, AZ, Abstract No. 506, pp. 753 (October 13-17, 1991)							
	DY	Zafonte, Leo, et al., "UV/Ozone Cleaning For Organics Removal on Silicon Wafers," SPIE Optical Microlithography III: Technology for the Next Decade, Vol. 470, pp. 164-175 (1984)							
	DZ	Baumgärtner, H., et al., "Ozone Cleaning of the SI-SIO ₂ System," Appl. Phys. A, Vol. 43, pp. 223-226 (1987)							
	EA	Isagawa, Tatsuhiko, et al., "Ultra Clean Surface Preparation Using Ozonized Ultrapure Water," Extended Abstracts of the 1982 Int'l. Conf. on Solid State Devices and Materials, pp. 193-195 (1992)							
	EB	Shimada, H., et al., "Residual-Surfactant-Free Photoresist Development Process," J. Electrochem., Soc., 139(6):1721-1730 (June 1992)							
	EC	Tong, Jeremy K. et al., "Aqueous Ozone Cleaning of Silicon Wafers," Proc. of 2 nd Int'l. Symposium on Cleaning Tech. In Semiconductor Device Mfg., pp. 18-25 (October 1992)							
	ED	Tong, Jeremy K., et al., "Aqueous Ozone Cleaning of Silicon Wafers," Res. Soc. Symp., pp. 18-25 (1993)							
	EE	Ohmi, T., et al., "Native Oxide Growth and Organic Impurity Removal on Si Surface with Ozone-Injected Ultrapure Water," J. Electrochem. Soc., 140(3):804-810 (March 1993)							
	EF	Vig, John R., et al., "UV/Ozone Cleaning of Surfaces," <i>IEEE Transactions on Parts, Hybrids, and Packaging</i> , Vol. PHP-12(4):365-370 (December 1976)							
	EG	Vig, John R., "UV/ozone cleaning of surfaces," U.S. Army Electronics Technology and Devices Laboratory, ERADCOM, Ft. Monmouth, NJ, 07703-5302, pp. 1027-1034 (September/October 1984)							
	ЕН	Tabe, Michiharu, "UV ozone cleaning of silicon substrates in silicon molecular beam epitaxy," Appl. Phys. Lett., 45(10):1073-1075 (November 1984)							
	EI	Zazzera, L.A., et al., "XPS and SIMS Study of Anhydrous HF and UV/Ozone-Modified Silicon (100) Surfaces," J. Electrochem. Soc., 136(2):484-491 (February 1989)							
MK	EJ	Gabriel, Calvin, et al., "Reduced Device Damage Using An Ozone Based Photoresist Removal Process," SPIE Advances in Resist Technology and Processing VI, Vol. 1086, pp. 598-604 (1989)							

EXAMINER	0/	DATE CONSIDERED				
	ufgr	08/18/04				
*EXAMINER:	Initial if reference considered, whether or not criteria is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to application(s).					

Sheet

4

EM No. EV 254990096US **COMPLETE IF KNOWN** Not yet assigned Application Number **INFORMATION DISCLOSURE** Confirmation Number ' STATEMENT BY APPLICANT Filing Date October 7, 2003 Form PTO-1449 (Modified) First Named Inventor Eric J. BERGMAN (Use several sheets if necessary) Group Art Unit **Examiner Name** of Sheet 5 5 Attorney Docket No. 54008.8012.US04

		OTHER PRIOR ART-NON PATENT LITERATURE DOCUMENTS			
Examiner Initials*	Cite No.	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume issue number(s), publisher, city and/or country where published.	Т		
MC EK		Suemitsu, Maki, et al., "Low Temperature Silicon Surface Cleaning by HF Etching/Ultraviolet Ozone Cleaning (HF/UVOC) Method (I) -Optimization of the HF Treatment-," <i>Japanese Journal of Applied Physic</i> 28(12):2421-2424 (December 1989)			
MK	EL	Kern, Werner, "The Evolution of Silicon Wafer Cleaning Technology," J. Electrochem. Soc., 137(6):1887-1892 (June 1990)			
7771	EM	Kasi, S.R., et al., "Surface Hydrocarbon Removal from Si by UV/Ozone," ECS Extended Abstracts, No. 458, pp. 691-692 (199)			
MC	EN	Kasi, Srinandan R., et al., "Vapor phase hydrocarbon removal for Si processing," Appl. Phys. Lett., 57(20):2095-2097 (November 1990)			
	EO	Huynh, Cuc K., et al., "Plasma versus ozone photoresist ashing: Temperature effects on process-induced mobile contamination," J. Vac. Sci. Technol., B9(2):353-356 (Mar/Apr 1991)			
	EP	Bedge, Satish, et al., "Kinetics of UV/O ₂ Cleaning and Surface Passivation Experiments and Modeling," Mat. Res. Soc. Symp. Proc., Vol. 259, pp. 207-212 (1992)			
	EQ	Goulding, M.R., "The selective epitaxial growth of silicon," Materials Science and Engineering, Vol. B17, pp. 47-67 (1993)			
	ER	Ganesan, Gans S., et al., "Characterizing Organic Contamination in IC Package Assembly," The Int'l. Soc. for Hybrid Microelectronics, Vol. 17, #2, Second Quarter, pp. 152-160 (1994)			
	ES	Egitto, F.D., et al., "Removal of Poly(Dimethylsiloxane) Contamination From Silicon Surfaces With UV/Ozone Treatment," Mat. Res. Soc. Symp. Proc., Vol. 385, pp. 245-250 (1995)			
	ET	Amick, J.A., "Cleanliness and the Cleaning of Silicon Wafers," Solid State Technology, pp. 47-52 (November 1976)			
	EU	Bolon, D.A., et al., "Ultraviolet Depolymerization of Photoresist Polymers," Polymer Engineering and Science, 12(2):108-111 (March 1972)			
	EV	Krusell, W.C., et al., "The Characterization of Silicon Substrate Cleaning Treatments by use of SIMS and MOS Electrical Testing," ECS Extended Abstracts, No. 229, p. 331-332 (1986)			
	EW	Anantharaman, Ven, Ph.D., et al., "ORGANICS: Detection and Characterization of Organics in Semiconductor DI Water Processes," Ultrapure Water, pp. 30-36 (April 1994)			
	EX	"Ozone Concentration Measurement In A Process Gas," Proposed IOA Pan American Group Guideline, pp. 1-21 (December 1993)			
MR	EY	"Ozone for Semiconductor Applications," Sorbios, pp. 1-6 (October 1991)			

EXAMINER	ufor	DATE CONSIDERED 08 / 18 / 04
*EXAMINER:	Initial if reference considered, whether or not criteria is in confor considered. Include copy of this form with next communication	rmance with MPEP 609. Draw line through citation if not in conformance and not to application(s).

OIPE				COMPLETE IF KNOWN		
/ ' ' \	`			Application Number	10/681,553	
HIFORMATION DISCLOSURE				Confirmation Number		
STATEMENT BY APPLICANT				Filing Date	October 7, 2003	
1 Molth F10-1449 (Modilled)				First Named Inventor	Eric J. BERGMAN	
, (ψe e	several she	eets if necessary)	l	Group Art Unit		
E ADEMARK!		•	Examiner Name			
Sheet	1	of	1	Attorney Docket No.	54008.8012.US04 (P96-0015US5)	

					U.S. PATENT DOCUMENTS			
Examiner Initials*	Cit				Date of Publication of Filing Date Name of Patentee or Inventor of Cited Ocument Ocument		Pages, Columns, Lines, Where Relevant Passages o Relevant Figures Appear	
MK				Kamikawa et al. 07/10/01				
011-	1					1		
						<u> </u>		
				FO	REIGN PATENT DOCUMENTS			
		Fore	Foreign Patent or Application			Date of Publication or Filing Date	Pages, Columns, Lines, Where Relevant	
Examiner Initials*	Cite No.	Office	NUMBER	Kind Code (if known)	_ · · · · · · · · · · · · · · · · · · ·	of Cited Document	Passages or Relevant Figures Appear	т
								ļ
						<u> </u>		
							•	
			OTHER	PRIOR AF	RT-NON PATENT LITERATURE (OCUMENTS		
C	C:1-	,,	Include name	of the author	(in CAPITAL LETTERS), title of the article	(when appropriate)	, title of the item	
Examiner Cite (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume issue number(s), publisher, nutials* No. and/or country where published.					Der(5), publisher, City	т		
								+
				"				_
				_		_		
	l	L						

EXAMINER	ufo	DATE CONSIDERED 08 //8 /04	
*EXAMINER:	Initial if reference considered, whether or not criteria is in confor	rmance with MPEP 609. Draw line through citation if not in conformance and not	